

WHAT IS CLAIMED IS:

1. A fuel injection valve for injecting fuel, wherein a fuel spray injected from the fuel injection valve includes a first portion having a long spray reaching distance and a second portion having a short spray reaching distance, wherein the first portion consists essentially of a fuel rich spray portion and the second portion consists essentially of a fuel lean spray portion.

2. A fuel injection valve according to claim 1, wherein the first portion having the long spray reaching distance and the second portion having the short spray reaching distance are formed around a circumference of a cross section crossing a central axis line of an injection hole in the fuel injection.

3. A fuel injection valve according to claim 1, wherein the fuel lean spray portion exists at only one location in a circumference of a cross section crossing a central axis line of an injection hole in the fuel injection valve.

4. A fuel injection valve according to claim 2 wherein the fuel lean spray portion exists at only one location in the circumference of the cross section crossing the central axis line of the injection hole in the fuel injection valve.